

PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR108/U

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and [MIL-PRF-3098](#).

Pertinent characteristics: 50 MHz to 93 MHz; fifth mechanical overtone; controlled; series resonance.

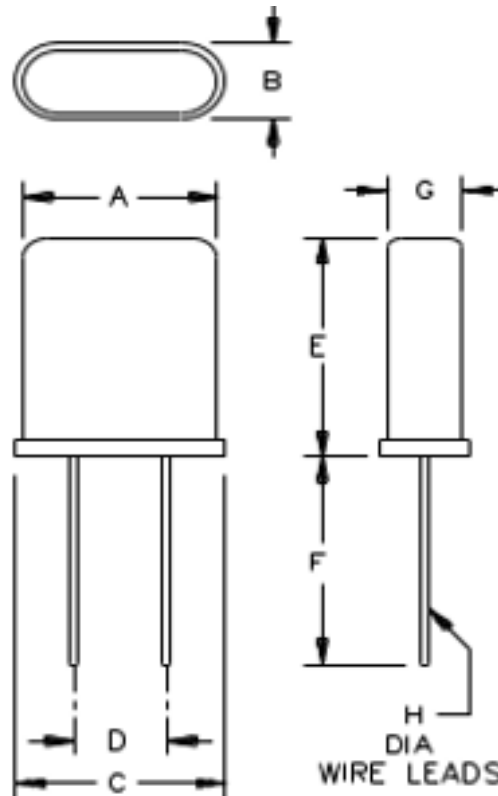


FIGURE 1. Crystal unit - CR108/U.



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Ltr	Inches		mm	
	Min	Max	Min	Max
A	---	.402	---	10.21
B	---	.183	---	4.65
C	---	.435	---	11.05
D	.184	.200	4.67	5.08
E	---	.530	---	13.46
F	.50	---	12.7	---
G	---	.150	---	3.81
H	.015	.019	0.38	0.48

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking to be in accordance with [MIL-PRF-3098](#).

FIGURE 1. Type CR108/U, crystal unit - Continued.

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REQUIREMENTS:

Dimensions, marking, and configuration: See [figure 1](#). ^{1/}

Frequency range: 50 MHz to 93 MHz, inclusive.

Capacitance, shunt: 5.5 pF, maximum.

Frequency stability: ± 2.5 ppm.

Mode of oscillation: Fifth mechanical overtone.

Operating temperature range (controlled): $+80^{\circ}\text{C}$ to $+90^{\circ}\text{C}$, inclusive.

Frequency tolerance: ± 10 ppm (including frequency stability).

Equivalent resistance: 50 ohms, maximum.

Operable temperature range: -55°C to $+80^{\circ}\text{C}$ and $+90^{\circ}\text{C}$ to $+105^{\circ}\text{C}$.

Reference temperature: $+85^{\circ}\text{C} \pm 1^{\circ}\text{C}$.

Rated drive level: 1.0 mW, maximum.

Resonance: Series.

Shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Vibration high frequency: [MIL-STD-202-204](#), test condition A.

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Thermal shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Aging:

Frequency change permitted: ± 3 ppm.

Qualification: Not required. First article testing (FAT) shall be performed according to the qualification table II of [MIL-PRF-3098](#); for product level B, Table II is applicable and for product level S, Table II-A is applicable. Thirty samples for product level B and forty-five samples for product level S shall be selected. Approval of FAT shall be at the discretion of the acquiring activity.

^{1/} These crystal units were previously fabricated using Air Force Technical Order 12-1-20 and/or Collins drawing numbers 289-2844 through 2858-00.

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Reference documents. In addition to [MIL-PRF-3098](#), this document references the following:

[MIL-STD-202-204](#)

Amendment notations. The margins of this specification sheet are marked with vertical line to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:

Army - CR

Navy - EC

Air Force - 85

DLA - CC

Preparing activity:

DLA – CC

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NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.